

QUEUES: CONCEPTUAL

Queues Introduction

1 min

A queue is a data structure which contains an ordered set of data.

Queues provide three methods for interaction:

- Enqueue - adds data to the "back" or end of the queue
- Dequeue - provides and removes data from the "front" or beginning of the queue
- Peek - reveals data from the "front" of the queue without removing it

This data structure mimics a physical queue of objects like a line of people buying movie tickets. Each person has a name (the data). The first person to *enqueue*, or get into line, is both at the front and back of the line. As each new person enqueues, they become the new back of the line.

When the cashier serves someone, they begin at the front of the line (or people would get very mad!). Each person served is *dequeued* from the front of the line, they purchase a ticket and leave.

If they just want to know who is next in line, they can *peek* and get their name **without removing them from the queue**.

The first person in the queue is the first to be served. Queues are a First In, First Out or FIFO structure.

Instructions

Can you think of another real-world example of a queue?

What types of programs would make use of a queue data structure?

